

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently Amended)** A device for determining the coagulation state of a sample comprising:

a chamber defining a volume for receiving a sample to be analysed;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field;

a means for applying a magnetic field to at least part of the chamber volume; and

at least one magnetic field sensor operative to continuously detect the time-dependent movement of the at least one particle throughout its movement within the chamber;

and a processor configured to determine the coagulation state of the sample based on the continuously detected time-dependent movement of the at least one particle throughout its movement within the chamber.

2. **(Previously Presented)** The device of claim 1, wherein the device further comprises a display.

3. **(Previously Presented)** The device of claim 1, wherein the device displays a value that is correlated with a disturbance of hemostasis.

4. **(Previously Presented)** The device of claim 1, wherein the device displays a clotting time and/or an INR value.

5. **(Previously Presented)** The device of claim 1, wherein the sample is blood or plasma.

6. **(Previously Presented)** The device of claim 1, further comprising a filling chamber.

7. **(Previously Presented)** The device of claim 6, further comprising a filling device for filling the chamber.

8. **(Previously Presented)** The device of claim 7, where the filling device comprises a capillary.
9. **(Previously Presented)** The device of claim 1, wherein the material which experiences a force when placed in a magnetic field is ferromagnetic, paramagnetic, or superparamagnetic.
10. **(Previously Presented)** The device of claim 1, where the at least one particle is generally spherical.
11. **(Previously Presented)** The device of claim 1, where the at least one particle has a size in the range of about 2 to about 500 μ m.
12. **(Previously Presented)** The device of claim 11, wherein the at least one particle has a size in the range of about 2 to about 20 μ m in at least one direction.
13. **(Previously Presented)** The device of claim 1, wherein the at least one particle comprises two or more different materials and wherein at least one material experiences a force when exposed to a magnetic field.
14. **(Previously Presented)** The device of claim 1, wherein more than one particle is disposed in the chamber volume.
15. **(Previously Presented)** The device of claim 1, wherein the magnetic fields is between about 1 and about 100 mT.
16. **(Previously Presented)** The device of claim 15, wherein the magnetic field is between about 10 and about 50 mT.
17. **(Previously Presented)** The device of claim 16, wherein the magnetic field is between about 10 to about 20 mT.
18. **(Previously Presented)** The device of claim 1, wherein the device further comprises at least one reagent disposed within the chamber prior to introduction of a sample into the device.
19. **(Previously Presented)** The device of claim 18, wherein the reagent is selected from the group consisting of: clotting agents, anti-clotting agents, and reagents suitable for measurement of a disturbance of hemostasis.

20. **(Previously Presented)** The device of claim 1, wherein the means for providing a magnetic field comprises two spaced apart electromagnets.
21. **(Previously Presented)** The device of claim 20, wherein each electromagnet produces a constant field and is activated alternatively with a direct current.
22. **(Previously Presented)** The device of claim 1, wherein the magnetic field sensor is a Hall Effect sensor.
23. **(Previously Presented)** The device of claim 1, wherein the device further comprises circuitry for measuring the time elapsed from introduction of a sample until a change in coagulation state is detected.
24. **(Previously Presented)** The device of claim 1, wherein the device further comprises a control means.
25. **(Currently Amended)** A device for determining the coagulation time of a sample, the device comprising:
- a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle;
 - a magnetic device co-operating with the chamber;
 - a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample; and
 - a magnetic field sensor to continuously detect the time-dependent movement of the at least one particle as it migrates to and fro within the chamber.
26. **(Previously Presented)** The device of claim 25, wherein the chamber has a volume of less than about 25 μ l.
27. **(Previously Presented)** The device of claim 26, wherein the chamber has a volume less than about 5 μ l.
28. **(Previously Presented)** The device of claim 25, wherein the device further comprises a means for heating the chamber.

29. **(Previously Presented)** The device of claim 25, wherein the chamber is formed in a disposable support strip which is removable from the device.

30. **(Currently Amended)** A method of determining the coagulation state of a sample comprising:

providing a sample containing at least one particle comprising a material which experiences a force when placed in a magnetic field;

applying a magnetic field to said sample; and

using a magnetic field sensor to continuously detect the time-dependent movement of the at least one particle along its movement to determine the coagulation state of the sample.

31. **(Currently Amended)** A method of determining the coagulation time of a sample comprising:

causing particles comprised of material which experiences a force when placed in a magnetic field to move through said sample;

using a magnetic field sensor to continuously detect the time-dependent movement of the particles as they move; and

noting that said coagulation time is the instant at which changes in the properties of said sample reduce the time-dependent movement.

32. **(Currently Amended)** A device for determining the coagulation state of a sample comprising:

a chamber defining a volume for receiving a sample to be analysed;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

a means for applying a magnetic field to at least part of the chamber volume; and

at least one magnetic field sensor operative to continuously detect the movement of the at least one particle as it moves within the chamber;

and a processor configured to determine the coagulation state of the sample based on the continuously detected time-dependent movement of the at least one particle.

33. **(Currently Amended)** A device for determining the coagulation state of a sample comprising:

a chamber defining a volume for receiving a sample to be analysed;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

a means for applying a magnetic field to at least part of the chamber volume; and

at least one magnetic field sensor operative to continuously detect the time-dependent movement of the at least one particle as it moves within the chamber;

and a processor configured to determine the coagulation state of the sample based on the continuously detected time-dependent movement of the at least one particle.

34. **(Currently Amended)** A device for determining the coagulation time of a sample, the device comprising:

a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle;

at least one magnetic field generator configured to generate a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample;

a magnetic field sensor to continuously detect the time-dependent movement of the at least one particle as it migrates to and fro within the chamber; and

and a processor configured to determine the coagulation time of the sample based on the continuously detected time-dependent movement of the at least one particle.

35. **(Currently Amended)** A device for determining the coagulation time of a sample, the device comprising:

a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

at least one magnetic field generator configured to generate a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample;

a magnetic field sensor to continuously detect the movement of the at least one particle as it migrates to and fro within the chamber; and

and a processor configured to determine the coagulation time of the sample based on the continuously detected time-dependent movement of the at least one particle.

36. **(Currently Amended)** A device for determining the coagulation time of a sample, the device comprising:

a chamber defining a volume for holding a quantity of said sample, wherein the chamber holds at least one particle and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

at least one magnetic field generator configured to generate a magnetic field which causes the at least one particle to migrate to and fro within the chamber through said sample;

a magnetic field sensor to continuously detect the time-dependent movement of the at least one particle as it migrates to and fro within the chamber; and

and a processor configured to determine the coagulation time of the sample based on the continuously detected time-dependent movement of the at least one particle.

37. **(Currently Amended)** A method of determining the coagulation time of a blood-derived sample comprising:

subjecting a mixture to a magnetic field, the mixture comprising the blood-derived sample and at least one particle comprised of material which experiences a force when placed in a magnetic field;

magnetically detecting continuously the time-dependent movement of the at least one particle as it moves within the chamber; and

determining the coagulation time based upon the magnetically detected time-dependent movement as detected at multiple times.

38. **(Previously Presented)** The method of claim 37, wherein the magnetic field is an oscillating magnetic field.

39. **(Currently Amended)** A method of determining the coagulation time of a blood-derived sample comprising:

subjecting a mixture to a magnetic field, the mixture comprising the blood-derived sample and at least one particle comprised of material which experiences a force when placed in a magnetic field;

magnetically detecting continuously the time-dependent movement of the at least one particle as it moves within the chamber; and

determining the coagulation time of the blood-derived sample based upon magnetically detecting reduced time-dependent movement of the at least one particle.

40. **(Previously Presented)** The method of claim 39, wherein the magnetic field is an oscillating magnetic field.